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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,160	07/25/2005	Seong-Jin Moon	0700-0122PUS1	4271
2292 7590 06/28/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER TRAN, THUY V	
			ART UNIT 2821	PAPER NUMBER
			NOTIFICATION DATE 06/28/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/543,160

Applicant(s)

MOON, SEONG-JIN

Examiner

Thuy V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 07/25/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Applicant's communication filed on 07/25/2005.

In virtue of this communication, claims 1-6 are currently presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 07/25/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings Objections

3. The drawings are objected to because Figs. 1-3 are not labeled correctly.
4. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections/ Minor Informalities

5. Claims 1, 3, and 6 are objected to because of the following informalities:
Claim 1, line 2, "the" should be changed to --an--;

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Claim 1, line 13, "the" (first occurrence) should be deleted;

Claim 1, line 14, "the" (first occurrence) should be deleted;

Claim 3, line 2, "the" should be changed to --an--;

Claim 3, line 14, "the" (first occurrence) should be deleted;

Claim 3, line 15, "the" (first occurrence) should be deleted; and "terminal" should be changed to --terminals--; and

Claim 6, line 2, "claims 3 ~ 5" should be changed to --any one of claims 3-5--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Garrison et al. (U.S. Patent No. 5,051,665; hereinafter "Garrison").

With respect to claim 1, Garrison discloses, in Figs. 1-2, an instantaneous electronic ballast for a metal halide lamp [22] having a power converter (which includes 24, excluding IC2) for switching an output voltage of a rectifier (within [14]) that converts an AC power into a DC power to generate a voltage having a given frequency (see col. 7, lines 22-23) within a high frequency region, thus driving the metal halide lamp [22], a current sensor [16A] for sensing a current to be used as current control information of the power converter, and a power converter controller [IC2] for controlling the power converter in response to the sensed signal of the current sensor, comprising a state transition circuit [C13, R12, SG, W4, W6] having a first

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capacitor [C13], a first resistor [R12], and a first inductor [W6] that are sequentially serially connected between output terminals of the power converter and input terminals of the metal halide lamp [22], for supplying a state transition current necessary to shift the metal halide lamp from a glow discharge phase to an arc discharge phase (see col. 4, lines 13-16; col. 7, lines 4-6).

With respect to claim 2, Garrison discloses, in Figs. 1-2, that the current sensor [16A] is installed at the front of the state transition circuit to sense only a normal current being a current for keeping a lightening state of the lamp, which is applied from the power converter to the metal halide lamp [22].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garrison.

With respect to claim 3, Garrison discloses all of the claimed limitations, as expressly recited in claim 1 above, except for the state transition circuit being comprised of two resistors in parallel (or second and third resistors in parallel as claimed). However, this difference is not of patentable merit since it has been theoretically known that two resistors connected in parallel would be equivalent to a resistor having a resistance value equal to a ratio of the sum and the product of the two resistors. For this reason, to arrange in the state transition circuit of Garrison two resistors in parallel having a resistance value equal to that of the first resistor of Garrison

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would have been deemed obvious to a person skilled in the art.

With respect to claim 4, Garrison obviously discloses the time constant of the second resistor through which a charge current flows from the power converter to the second capacitor is set significantly higher than that of the third resistor through which a discharge current flows from the second capacitor to the metal halide lamp.

With respect to claim 6, Garrison discloses, in Figs. 1-2, that the current sensor is installed at the front of the state transition circuit to sense only the normal current being the current for keeping the lightening state of the lamp that is supplied from the power converter to the metal halide lamp [22].

Allowable Subject Matter

10. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest an instantaneous electronic ballast for the metal halide lamp further comprising second and third diodes for preventing backward voltages, which are serially connected on the input terminal side of the second resistor through which a charge current flows from the power converter to the second capacitor, and the output terminal side of the third resistor through which a discharge current flows from the second capacitor to the metal halide lamp, respectively, in combination with the remaining claimed limitation as called for I claim 5.

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Citation of relevant prior art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Prior art Kominami et al. (U.S. Patent No. 5,949,192) discloses an operating apparatus for discharge lamp.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

06/24/2007



**THUY V. TRAN
PRIMARY EXAMINER**